United Nations A/AC.105/L.314

General Assembly

Distr.: Limited
22 June 2018

Original: English

Committee on the Peaceful Uses of Outer Space
Sixty-first session
Vienna, 20–29 June 2018

Draft report

Chapter I

Introduction

1. The Committee on the Peaceful Uses of Outer Space held its sixty-first session in Vienna from 20 to 29 June 2018. The officers of the Committee were as follows:

Chair	Rosa María Ramírez de Arellano y Haro (Mexico)
First Vice-Chair	Thomas Djamaluddin (Indonesia)
Second Vice-Chair/Rapporteur	Keren Shahar (Israel)

1. Meetings of subsidiary bodies

2. The Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-fifth session in Vienna from 29 January to 9 February 2018, under the chairmanship of Pontsho Maruping (South Africa). The report of the Subcommittee was before the Committee (A/AC.105/1167).

3. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-seventh session in Vienna from 9 to 20 April 2018 under the chairmanship of Andrzej Misztal (Poland). The report of the Subcommittee was before the Committee (A/AC.105/1177).

2. Adoption of the agenda

4. At its opening meeting, the Committee adopted the following agenda:

20 and 21 June 2018

1. Opening of the session.
2. Adoption of the agenda.
3. Election of officers.
4. UNISPACE+50 high-level segment.

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5. Statement by the Chair.

6. General exchange of views.

7. Ways and means of maintaining outer space for peaceful purposes.

8. Report of the Scientific and Technical Subcommittee on its fifty-fifth session.

9. Report of the Legal Subcommittee on its fifty-seventh session.

10. Space and sustainable development.

11. Spin-off benefits of space technology: review of current status.

12. Space and water.

13. Space and climate change.

14. Use of space technology in the United Nations system.

15. Future role of the Committee.

16. Other matters.

17. Report of the Committee to the General Assembly.

3. Election of officers

5. At the 738th meeting of the Committee, on 20 June, Rosa María Ramírez de Arellano (Mexico) was elected Chair of the Committee for the 2018 session, and André João Rypl (Brazil) for the 2019 session, Thomas Djamaluddin (Indonesia) was elected First Vice-Chair and Keren Shahar (Israel) was elected Second Vice-Chair/Rapporteur for the 2018 and 2019 sessions.

6. At the same meeting, the Committee endorsed the election of Pontsho Maruping (South Africa) as Chair of the Scientific and Technical Subcommittee and Andrzej Misztal (Poland) as Chair of the Legal Subcommittee for the 2018–2019 period.

4. Organization of work at the sixty-first session

7. In accordance with the agreement of the Committee at its sixtieth session, in 2017, the sixty-first session of the Committee consisted of the following:

(a) UNISPACE+50 high-level segment, held on 20 and 21 June 2018, with the participation of States Members of the United Nations, as well as the broader space community, including United Nations entities, other international intergovernmental and non-governmental organizations and non-governmental entities, including from industry and the private sector;

(b) Regular working session of the Committee, held from 22 to 29 June 2018, with the participation of States members and permanent observers of the Committee.

5. Membership

8. In accordance with General Assembly resolutions 1472 A (XIV), 1721 E (XVI), 3182 (XXVIII), 32/196 B, 35/16, 49/33, 56/51, 57/116, 59/116, 62/217, 65/97, 66/71 and 68/75 and decisions 45/315, 67/412, 67/528 and 70/518, the Committee on the Peaceful Uses of Outer Space was composed of the following 87 States: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Benin, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, China, Colombia, Costa Rica, Cuba, Czechia, Denmark, Ecuador, Egypt, El Salvador, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Lebanon, Libya, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania,

Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

6. Attendance

(a) UNISPACE+50 high-level segment on 20–21 June 2018

9. Representatives of the following 92 Member States attended the UNISPACE+50 high-level segment: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Bhutan, Bolivia (Plurinational State of), Botswana, Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Costa Rica, Cuba, Cyprus, Czechia, Democratic People's Republic of Korea, Denmark, Dominican Republic, Ecuador, Estonia, France, Finland, Germany, Ghana, Greece, Honduras, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Luxembourg, Malaysia, Malta, Mexico, Mongolia, Morocco, Myanmar, Namibia, Nepal, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela (Bolivarian republic of) and Viet Nam.

10. The UNISPACE+50 high-level segment was also attended by observers for the European Union, the Holy See and the Sovereign Military Order of Malta.

11. Observers for the Office of Legal Affairs, the United Nations Office for Disarmament Affairs and the Economic and Social Commission for Asia and the Pacific of the Secretariat, the United Nations Institute for Disarmament Research (UNIDIR), the International Civil Aviation Organization, the World Health Organization (WHO) and the World Meteorological Organization (WMO) also attended the UNISPACE+50 high-level segment.

12. The UNISPACE+50 high-level segment was attended by observers for the following intergovernmental organizations: Asia-Pacific Space Cooperation Organization (APSCO), Association of Remote Sensing Centres in the Arab World (ARSCAW), Regional Centre for Remote Sensing of the North African States (CRTEAN), European Organization for Astronomical Research in the Southern Hemisphere (ESO), European Space Agency (ESA), European Telecommunications Satellite Organization (EUTELSAT-IGO), International Mobile Satellite Organization (IMSO), Inter-Islamic Network on Space Sciences and Technology (ISNET), International Organization of Space Communications (Intersputnik) and International Telecommunications Satellite Organization (ITSO).

13. The UNISPACE+50 high-level segment was attended by observers for the following non-governmental organizations: African Association of Remote Sensing of the Environment (AARSE), African Organization of Cartography and Remote Sensing (AOCRS), Association of Space Explorers (ASE), Committee on Earth Observation Satellites (CEOS), Committee on Space Research (COSPAR), European Science Foundation (ESF), European Space Policy Institute (ESPI), EURISY, Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, International Academy of Astronautics (IAA), International Association for the Advancement of Space Safety (IAASS), International Astronautical Federation (IAF), International Air Transport Association (IATA), International Astronomical Union (IAU), International Institute for Applied Systems Analysis (IIASA), International Institute of Space Law (ISIL), International Law Association (ILA), International Society for Photogrammetry and Remote Sensing (ISPRS), International Space University (ISU), National Space Society (NSS), Prince Sultan bin Abdulaziz International Prize for Water (PSIW), Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), Secure World Foundation (SWF), Space Generation Advisory

Council (SGAC), The Planetary Society (TPS), University Space Engineering Consortium-Global (UNISEC-Global) and World Space Week Association (WSWA).

(b) Session of 22–29 June 2018

14. Representatives of the following [...] States members of the Committee attended the session: Albania, Algeria, Argentina, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechia, Denmark, Ecuador, Egypt, El Salvador, France, Germany, Ghana, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Lebanon, Libya, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam.

15. Observers for the Office for Disarmament Affairs of the Secretariat, the Economic and Social Commission for Asia and the Pacific, the Office of Legal Affairs of the Secretariat, UNIDIR, the United Nations Office for Disarmament Research, the United Nations Liaison Office for Peace and Security, WHO, and WMO attended the session.

16. The session was attended by observers for the following intergovernmental organizations with permanent observer status with the Committee: APSCO, ESO, ESA, EUTELSAT-IGO, IMSO and ITSO.

17. The session was also attended by observers for the following non-governmental organizations with permanent observer status with the Committee: AARSE, ASE, COSPAR, EURISY, ESF, ESPI, ISNET, IAA, IAASS, IAF, IAU, IISL, ISU, ISPRS, NSS, PSIPW, CRTEAN, SWF, SGAC, UNISEC-Global and WSWA.

18. A list of representatives of States members of the Committee, States not members of the Committee, United Nations entities and other organizations attending the session is contained in A/AC.105/2018/INF/1.

7. Adoption of the report of the Committee

19. After considering the various items before it, the Committee, at its [...] meeting, on [...] June 2018, adopted its report to the General Assembly containing the recommendations and decisions set out below.

Chapter II

UNISPACE+50 high-level segment of the sixty-first session of the Committee on the Peaceful Uses of Outer Space on the occasion of the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space, held on 20 and 21 June 2018

20. Pursuant to General Assembly resolution 72/79 and the agreement reached by the Committee on the Peaceful Uses of Outer Space at its sixtieth session, the Committee, at its sixty-first session, held a high-level segment on 20 and 21 June 2018, open to all States Members of the United Nations, to mark the fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50).

21. The UNISPACE+50 high-level segment enjoyed the participation of representatives at the ministerial level, vice-ministerial level, heads of space agencies, astronauts, the United Nations Champion for Space and other dignitaries who cited

the achievements of the Committee over the course of 50 years, the significant benefits space contributed to the attainment of the Sustainable Development Goals, the importance of the peaceful uses of outer space for all humankind and the need to preserve outer space for current and future generations.

22. The programme of the UNISPACE high-level segment included opening addresses, the endorsement of the draft resolution entitled "Fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space: space as a driver of sustainable development" and addresses by representatives of Member States and permanent observers of the Committee.

23. The programme also included the donation of a United Nations Sustainable Development Goals flag that had been flown at the International Space Station, the unveiling of the UNISPACE+50 stamps of the United Nations Postal Administration, the opening of the UNISPACE+50 exhibition, the announcement of the prize-winners of the Prince Sultan bin Abdulaziz International Prize for Water, the live in-flight call from the International Space Station, and the high-level panel of the Inter-Agency Meeting on Outer Space Activities (UN-Space).

24. Opening addresses were delivered by António Guterres, Secretary-General of the United Nations, through a video message; guest of honour, Alexander Van der Bellen, President of Austria; Yury Fedotov, Director-General of the United Nations Office at Vienna; and Simonetta Di Pippo, Director of the Office for Outer Space Affairs of the Secretariat. The high-level segment was also addressed by the United Nations Champion for Space, Scott Kelly, and by the crew of the International Space Station, through a live in-flight call.

25. The Secretary-General, in his video message, recalled the 50 years since the Outer Space Treaty. He noted that humanity succeeded in overcoming political differences on Earth, to achieve great progress in outer space. He emphasized the influence outer space had on captivating our imagination and stressed outer space can help build a better world for all.

26. The guest of honour, the President of Austria, congratulated the Committee on the Peaceful Uses of Outer Space and the Office for Outer Space Affairs on the special occasion of UNISPACE+50, as the culmination of a series of high-level events which began in 1968, when the first UNISPACE conference was held in Vienna. He noted that over the decades, UNISPACE I and its follow-up conferences UNISPACE II in 1982 and UNISPACE III in 1999 delivered pioneering strategies and landmark outcomes, in particular such as the protection of the space environment and the access of developing countries to space science and its benefits. He further noted that UNISPACE+50 represented a starting point for a new approach to space policy and emphasized the importance of the "Space2030" agenda that would act as a driver of development, ensuring that all members of the international community could benefit equally from the potential of space activities, and in doing so, would contribute to the implementation of the 2030 Agenda for Sustainable Development.

27. The Director-General of the United Nations Office at Vienna noted that space technology was being increasingly used by the Vienna-based organizations and entities across the United Nations system in their daily work to support Member States across the three pillars of peace and security, human rights and development. He emphasized the unique role of the Office for Outer Space Affairs as the gateway to space in the United Nations system with its comprehensive mandate, addressing a broad spectrum of space activities, from science to law, engaged with a multitude of stakeholders with the objective of extending the benefits of space science and technology on a global scale and strengthening the use of space for sustainable development.

28. The Director of the Office for Outer Space Affairs, recalling the uniqueness of UNISPACE+50 as a joint endeavour to move the boundaries of space cooperation even further for the benefit of all humankind, stressed that the vision and actions contained in the UNISPACE+50 draft resolution to continue to develop the

"Space2030" agenda and its implementation plan would set the course for strengthening the contribution of space activities and space tools to achieving internationally agreed development goals. She noted that this was particularly important at times when the international community had committed to the goals and major targets of the global frameworks adopted by the international community in 2015, namely, the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Paris Agreement that required stronger space governance and supporting structures at all levels, including improved space-based data and space infrastructure.

29. The Chair of the Committee noted that preparations for UNISPACE+50 over the past three years had engaged the Committee, its two Subcommittees, States members of the Committee, permanent observer organizations, the Office for Outer Space Affairs and the broader space community to collectively assess the achievements of the Committee over nearly 60 years and outline priority areas for future consideration. She acknowledged that through this assessment, the Committee collectively agreed on seven UNISPACE+50 thematic priority areas covering a broad range of contemporary space matters of concern to major spacefaring nations and emerging space nations alike.

30. The crew of the International Space Station, in their live in-flight call, stressed the importance of harnessing the potential of space for all humankind and of furthering international cooperation in the exploration and use of outer space for peaceful purposes.

31. The States participating in the high-level segment endorsed the resolution entitled "Fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space: space as a driver of sustainable development" (A/AC.105/L.313), to be recommended to the General Assembly for adoption at its seventy-third session.

32. In the UNISPACE+50 high-level segment, statements were made by representatives of the following Member States: Algeria, Argentina, Australia, Austria, Belarus, Belgium, Bhutan, Brazil, Canada, Chile, China, Colombia, Costa Rica, Cuba, Cyprus, Czechia, Democratic People's Republic of Korea, Denmark, France, Germany, Ghana, Greece, India, Indonesia, Iraq, Iran (Islamic Republic of), Israel, Italy, Japan, Kazakhstan, Luxemburg, Malaysia, Mexico, Mongolia, Nepal, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Paraguay, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela (Bolivarian Republic of) and Viet Nam. The representative of Iraq made a statement on behalf of the Group of 77 and China, and the representative of the Plurinational State of Bolivia made a statement on behalf of the Group of Latin American and Caribbean States. The representative of the European Union made a statement on behalf of the European Union and its member States. The observer for the Holy See also made a statement.

33. In the UNISPACE+50 high-level segment, statements were made by representatives of the following international intergovernmental and non-governmental organizations and United Nations entities: APSCO, ESA, ESO, EURISY, IAF, IISL, SWF, UNISEC-Global, Economic and Social Commission for Asia and the Pacific, WMO and WSWA.

34. The participants in the UNISPACE+50 high-level segment noted the historic fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space and recalled that UNISPACE+50 was a common endeavour to strengthen the Committee for Peaceful Uses of Outer Space and its Subcommittees, supported by the Office for Outer Space Affairs, as unique platforms for global governance of outer space activities, and expressed support for the work of the Committee and the Office for Outer Space Affairs in that regard.

35. The participants in the UNISPACE+50 high-level segment emphasized the importance of building stronger partnerships and of a continued collective approach to advancing international cooperation in the peaceful uses of outer space, in particular in view of the growing complexities and diversification of space activities and with the aim to strengthen the use of space towards the path of achieving the Sustainable Development Goals.

36. The participants in the UNISPACE+50 high-level segment noted the importance of working together towards further development of a "Space2030" agenda and implementation plan as part of the ongoing development of a comprehensive strategy, based on the UNISPACE+50 preparatory process, that will contribute to a stronger global governance of outer space activities and strengthen the contribution of space activities and space tools to the achievement of the global agendas addressing long-term sustainable development concerns of humankind.

37. The participants in the UNISPACE+50 high-level segment noted the importance of further strengthening the role of the Committee in shaping international standards for space activities in many areas for the benefit of all countries, and in ensuring the long-term sustainability of outer space activities.

38. The participants in the UNISPACE+50 high-level segment underscored the role of space science and technology and their applications in meeting challenges to global development, the fostering of regional and interregional cooperation in space activities for sustainable development and the need for enhanced capacity-building in the use of space science and technology for the benefit of all countries.

39. The UN-Space high-level panel entitled "United Nations: reinforcing synergies for UNISPACE+50 and beyond" was organized as an integral part of the high-level segment at the level of heads of agencies. The panel discussion was opened and moderated by the Director of the Office for Outer Space Affairs and consisted of the following speakers: the Executive Director of the United Nations Office on Drugs and Crime; the Executive Secretary of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization; the Assistant Secretary-General for Legal Affairs and head of the Office of the Legal Counsel; the Managing Director of the Directorate of External Relations and Policy Research and Deputy to the Director General, United Nations Industrial Development Organization; the Director of the Office of Operations, Legal and Technology Services, Bureau for Management Services, United Nations Development Programme; and the Director of the Information and Communications Technology and Disaster Risk Reduction Division, Economic and Social Commission for Asia and the Pacific.

40. In a follow-up to the panel discussion, UN-Space issued a joint statement in which it highlighted the common aspiration of participating United Nations entities to strengthen the capacities of Member States for sustainable development, which could be achieved through the increased integration of space science, technology and their applications, as well as space law and policy, in national development strategies, and recognized the need for an integrated and coordinated approach based on the principles of equality and inclusiveness to ensure that the benefits of outer space shall be accessible to all States irrespective of their level of economic, social, scientific or technical development.

41. In concluding the panel discussion, the moderator noted the common aspiration of participating United Nations entities to strengthen capacities of Member States for sustainable development, which could be achieved through the increased integration of space science, technology and their applications, as well as space law and policy, in national development strategies; and noted the recognition of a need for an integrated and coordinated approach based on the principles of equality and inclusiveness to ensure that the benefits of outer space shall be accessible to all States irrespective of their level of economic, social, scientific or technical development.

42. The high-level segment included the official opening of the UNISPACE+50 exhibition held in the Vienna International Centre from 18 to 23 June 2018. The

exhibition, organized by the Office for Outer Space Affairs, comprised contributions from 43 exhibitors and concluded with a day open to the public on Saturday, 23 June, which received more than 350 visitors. The exhibitors were as follows: Agoria, Airbus, Algerian Space Agency (ASAL), APSCO, Association of Italian Space Enterprises, AUSTROSPACE, Brazilian Space Agency, CANEUS International, Centre for the Development of Industrial Technology (CDTI), Centre national d'études spatiales (CNES), China Aerospace Science and Industry Corporation, China Aerospace Science and Technology Corporation, China Manned Space Agency, China National Space Administration, China Satellite Navigation Office, Delta State University, Department of Science and Technology of South Africa, German Aerospace Centre (DLR), DigitalGlobe, ESO, ESA, European Union, For all Moonkind, ICE Cubes Service, Indian Space Research Organization, International Charter "Space and Major Disasters", International Charter, ispace Europe, Israel Space Agency, Italian Space Agency, King Abdulaziz City for Science and Technology, Korea Aerospace Research Institute, National Disaster Reduction Centre of China (NDRCC), Centre for Space Science and Technology Education in Asia and the Pacific, Romanian Space Agency, RT, Sierra Nevada Corporation, SGAC, PSIPW, Twenty First Century Aerospace Technology (21AT), UK Space Agency, UNISEC-Global, Permanent Mission of the United Arab Emirates to the United Nations (Vienna) and the Office for Outer Space Affairs.

43. The participants in the UNISPACE+50 high-level segment expressed appreciation to the Office for Outer Space Affairs for the successful preparation of UNISPACE+50 and a number of related side events, and congratulated the Office for its more than a quarter century's presence in Vienna.

44. The statements delivered during the UNISPACE+50 high-level segment are available on the website of the Office for Outer Space Affairs.

UNISPACE+50 Symposium on 18 and 19 June

45. In accordance with the plan of work for UNISPACE+50 as agreed by the Committee (see A/AC.105/L.297 and A/71/20), the two days prior to the sixty-first session, 18 and 19 June 2018, had been allocated to the UNISPACE+50 Symposium and outreach events.

46. The UNISPACE+50 Symposium, held on 18 and 19 June, opened with a special session entitled "Past, present and future of the peaceful uses of outer space" and was followed by four dedicated panel sessions, on "Space and industries" , "Space for women", "Space and civil society" and "Space and youth". The UNISPACE+50 Symposium concluded with a panel of heads of space agencies, with the participation of 26 space agencies of countries from all geographical regions.

47. The UNISPACE+50 Symposium benefited from the participation of more than 400 participants from government agencies, space agencies, private companies, universities research centres and civil society and brought together experts from the entire spectrum of the space sector, who addressed the role of space science and technology in fostering global development and cooperation from various perspectives and with respect to various subjects.

48. The UNISPACE+50 Symposium benefited from the diversity of the panels, which highlighted the current pace of developments in the space arena and the importance of the international community standing together to address future challenges in outer space, and underlined the importance of the United Nations being at the forefront of those developments.

49. The opening special session, entitled "Past, present and future of the peaceful uses of outer space", was designed to address the growing complexity of outer space activities in a timely manner. In particular, the session addressed the larger involvement of the private sector in space activities and the concurrent need to ensure alignment of national and international policies in that regard. The session participants also looked at the premises of international cooperation on the peaceful

uses of outer space, emphasizing the benefits of existing international space law as a way to keep checks and balances, and considered the usefulness of addressing issues related to liability, the registry of objects launched into outer space, long-term sustainability of outer space activities and confidence-building measures.

50. The panel on "Space and industries" addressed the importance of strengthening cooperation with industry and the private sector in order to build global partnerships for the attainment of the 2030 Agenda for Sustainable Development. The panel noted several pioneering advances in space science and technology applications that had enabled the provision of services and infrastructure that would not have been possible only a few years ago, such as launching a constellation of satellites to image the entire planet on a daily basis and monitor changes in the environment, and the use of artificial intelligence to process satellite imagery which was used to generate highly precise and quickly available information on crop yields.

51. The panel on "Space for women" looked at the challenges related to gender imbalance in the space sector, including in science, technology, engineering and mathematics education, and the low numbers of women engaged in astronomy in several countries. The panel presented several ways to improve the gender balance in space industry and the space sector in general, including the introduction of new, flexible career models, such as temporary leading positions and the introduction of part-time leading roles and team management positions, and the panel emphasized the importance of female role models and support to reconcile work and family life. A special screening of the interactive documentary, "Madame Mars: Women and the Quest for Worlds Beyond", was held as part of the panel.

52. The panel on "Space and civil society" highlighted the importance of raising awareness of the societal benefits of space and capacity-building and presented several ongoing initiatives and projects that used space technologies and applications to benefit societies, such as the use of the International Charter "Space and Major Disasters" and its universal access policy for facilitating activation by national civil protection agencies in case of disasters; the holding of the "Zero-G" summit as a way to facilitate synergies among government agencies, the private sector and civil society in the context of outer space activities; and space architecture projects to design infrastructure for use in outer space or on the Moon.

53. The "Space and youth" panel focused on the importance of giving young people inspiration about the role and value of space and space activities, in order to ensure the sustainability of outer space activities in the long term. In that regard, the United Nations Champion for Space, Scott Kelly, stressed the need to continue awareness-raising efforts to attract young people to science and engineering academic programmes that were the basis for outer space exploration.

54. The panel of the "Heads of space agencies" benefited from the participation of heads of or high-ranking officers of APSCO, ESA, the European GNSS Agency (GSA) and 26 space agencies of countries from all geographical regions.

55. The representatives of space agencies reiterated their commitment to supporting the Committee on the Peaceful Uses of Outer Space and the Office for Outer Space Affairs in the elaboration and subsequent implementation of the "Space2030" agenda and recognized the Committee's unique role at the global level in addressing global challenges such as the long-term sustainability of outer space activities, fostering dialogue among spacefaring and emerging space nations and developing countries, and facilitating discussions on a broad range of technical and legal topics.

56. The UNISPACE+50 Symposium also had several side events and receptions, including the following:

(a) Presentation of capacity-building programme, by ISRO;

(b) A special joint event on United Nations/Japan Cooperation Programme on KiboCUBE: Capacity-building through small satellite development, organized by Japan;

(c) "Contribution to Moon settlement", by Moon Village Association;

(d) "My planet, my future: space for the Sustainable Development Goals", organized by CANEUS International;

(e) "Climate change challenges as a priority of the 2030 Agenda", organized by the Mexican Space Agency;

(f) Briefing to the representatives of European Union member States' Parliaments, organized by the Office for Outer Space Affairs;

(g) "China's space cooperation: towards a shared future and benefits for all", by China;

(h) "Venμs: satellite technology for sustainable development", by France and Israel;

(i) "50 years of Earth observation: What's next?", by the International Society for Photogrammetry and Remote Sensing;

(j) "Italian space economy for sustainable development goals: seminar", by Italy.

57. On the margins of the UNISPACE+50 Symposium, the Office for Outer Space Affairs amended or signed several declarations on cooperation or memorandums of understanding with its partners, including the Airbus Defence and Space, DLR, Geo-Informatics and Space Technology Development Agency, ESA, the Japan Aerospace Exploration Agency (concerning the Cooperation Programme on CubeSat Deployment from the International Space Station Japanese Experiment Module (Kibo)), the China Manned Space Agency (concerning cooperation on the utilization of China's space station), the China National Space Administration (concerning cooperation on the Belt and Road Initiative Space Information Corridor) and the Ministry of Science and Information Communications Technology of Korea and the Korea Aerospace Research Institute.

58. Several space object models were donated to the Office for Outer Space Affairs during the UNISPACE+50 Symposium, including the donation of a Venμs satellite model by Israel and France; a Chinese Space Station model, donated by the China Manned Space Agency; a BeiDou Navigation Satellite model, donated by the BeiDou Navigation Satellite Office; the United Nations Sustainable Development Goals flag which had been flown to the International Space Station, donated by ESA astronaut Paolo Nespoli; and the satellite and launcher models donated by Pakistan. The models donated would be installed in the permanent exhibition of the Office, on the ground floor of the E-building of the Vienna International Centre.

59. The Committee noted that further information on the UNISPACE+50 Symposium, its panels, the exhibition and other related side events of 18 and 19 June was contained in a conference room paper (A/AC.105/2018/CRP.19) prepared by the Office for Outer Space Affairs.